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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/040,055 | 12/31/2001 | James K. Falbo | NTI-030 | 1929 |
| 29477 | 7590 | 08/11/2004 | EXAMINER | |
| BEVER HOFFMAN & HARMS, LLP 1432 CONCANNON BLVD BLDG G LIVERMORE, CA 94550-6006 | | | ROSSOSHEK, YELENA | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2825 | |

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/040,055

Applicant(s)FALBO ET AL. **Examiner**

Helen B Rossoshek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11,33 and 37-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11,33 and 37-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the Application 10/040,055 filed 12/31/2001 and Amendments filed 07/12/2004.

2. Claims 11, 33, 37-43 remain pending in the Application. Claims 1-10, 12-32, 34-36, 44-54 have been cancelled.

3. Examiner fully considered Applicant's amendments.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 11, 33, 37-43 are rejected under 35 U.S.C. 102(e) as being anticipated by Agrawal et al. (US Patent 6,523,162).

6. The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

With respect to claims 11 Agrawal et al. teaches a method for performing a layout beautification operation on an integrated circuit (IC) layout comprising a plurality of polygons, the method comprising applying a first action to a first portion of the IC layout responsive to determining that a first shape associated with the first action matches the first portion of the IC layout, the first shape comprising at least a first edge and a second edge related according to a defined property, the first shape being configured to match a first type of layout imperfection wherein the layout features comprises the polygon or groupings of polygons representing the layout imperfection (col. 14, ll.20-31); the second edge being contiguous with and substantially perpendicular to the first edge as shown on the Figs. 4a, 4b and 4c which provide examples of basic shapes wherein the second edge E412 is contiguous and substantially perpendicular to the first edge E411 (col. 6, ll. 35-37); and wherein the first shape further comprises: a third edge, the third edge being contiguous with and substantially perpendicular to the second edge as shown on the Figs. 4a-4c, 5a-5d, 6a-6e, 7a-7c and particularly according the Fig. 4b wherein the third edge E423 is contiguous and substantially perpendicular with the second edge E422; a fourth edge, the fourth edge being contiguous with and substantially perpendicular to the third edge as shown on the Figs. 4a-4c, 5a-5d, 6a-6e, 7a-7c and particularly according the Fig. 4c wherein the fourth edge E434 is contiguous and substantially perpendicular with the third edge E433; and a fifth edge, the fifth edge being contiguous with and substantially perpendicular to the fourth edge as shown on the Figs. 4a-4c, 5a-5d, 6a-6e, 7a-7c and particularly according the Fig. 4c wherein the fifth edge E435 is contiguous and

substantially perpendicular with the fourth edge E434 (col. 6, ll.44-51; col. 17, ll.10-21), wherein none of the first edge, the second edge, the third edge, the fourth edge, and the fifth edge are substantially side-by-side with each other as shown on the Fig. 4c.

With respect to claim 33 Agrawal et al. teaches a software program for performing layout beautification on a plurality of polygons in an integrated circuit (IC) layout, each of the plurality of polygons comprising a plurality of features, the software program (col. 19, ll.25-26; col. 20, ll.1-2) comprising: a first set of instructions for comparing a first shape to the plurality of features in each of the plurality of polygons to identify a first set of matching layout features, the first shape comprising at least a first edge and a second edge related according to a first property within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (col. 20, ll.3-7); a second set of instructions for performing a first layout beautification action on each of the first set of matching layout features within the code processing a first action (first layout beautification action) within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (col. 20, ll.16-19); third set of instructions for defining the first shape according to a set of user inputs within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (abstract; col. 20, ll.20-22); within the ability of the system and software (programming code) for providing shapes/action as retrieving from a remote source or defining by the user (abstract).

With respect to claim 37 Agrawal et al. teaches a software program for performing layout beautification on a plurality of polygons in an integrated circuit (IC) layout, each of the plurality of polygons comprising a plurality of features, the software program (col. 19, ll.25-26; col. 20, ll.1-2) comprising: a first set of instructions for comparing a first shape to the plurality of features in each of the plurality of polygons to identify a first set of matching layout features, the first shape comprising at least a first edge and a second edge related according to a first property within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (col. 20, ll.3-7); a second set of instructions for performing a first layout beautification action on each of the first set of matching layout features within the code processing a first action (first layout beautification action) within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (col. 20, ll.16-19); third set of instructions for defining the first shape according to a set of user inputs within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (abstract; col. 20, ll.20-22); a third set of instructions for loading the first shape from across a network within the code processing a first action (first layout beautification action) within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (col. 13, ll.51-53; col. 20, ll.23-24).

With respect to claim 38 Agrawal et al. teaches a software program for performing layout beautification on a plurality of polygons in an integrated circuit (IC) layout, each of the plurality of polygons comprising a plurality of features, the software program (col. 19, ll.25-26; col. 20, ll.1-2) comprising: a first set of instructions for comparing a first shape to the plurality of features in each of the plurality of polygons to identify a first set of matching layout features, the first shape comprising at least a first edge and a second edge related according to a first property within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (col. 20, ll.3-7); a second set of instructions for performing a first layout beautification action on each of the first set of matching layout features within the code processing a first action (first layout beautification action) within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (col. 20, ll.16-19); third set of instructions for defining the first shape according to a set of user inputs within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (abstract; col. 20, ll.20-22); a third set of instructions for defining the first layout beautification action according to a set of user inputs within the ability of the system and software (programming code) for providing shapes/action as retrieving from a remote source or defining by the user (abstract).

With respect to claim 39 Agrawal et al. teaches a software program for performing layout beautification on a plurality of polygons in an integrated circuit (IC)

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layout, each of the plurality of polygons comprising a plurality of features, the software program (col. 19, ll.25-26; col. 20, ll.1-2) comprising: a first set of instructions for comparing a first shape to the plurality of features in each of the plurality of polygons to identify a first set of matching layout features, the first shape comprising at least a first edge and a second edge related according to a first property within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (col. 20, ll.3-7); a second set of instructions for performing a first layout beautificati6n action on each of the first set of matching layout features within the code processing a first action (first layout beautification action) within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (col. 20, ll.16-19); third set of instructions for defining the first shape according to a set of user inputs within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (abstract; col. 20, ll.20-22); a third set of instructions for loading the first shape from across a network within the code processing a first action (first layout beautification action) within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code and within the ability of the system and software (programming code) for providing shapes/action as retrieving from a remote source or defining by the user (abstract; col. 13, ll.51-53; col. 20, ll.23-24).

With respect to claims 40-43 Agrawal et al. teaches a software program for performing layout beautification on a plurality of polygons in an integrated circuit (IC) layout, each of the plurality of polygons comprising a plurality of features, the software program (col. 19, ll.25-26; col. 20, ll.1-2) comprising: a first set of instructions for comparing a first shape to the plurality of features in each of the plurality of polygons to identify a first set of matching layout features, the first shape comprising at least a first edge and a second edge related according to a first property within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (col. 20, ll.3-7); a second set of instructions for performing a first layout beautification action on each of the first set of matching layout features within the code processing a first action (first layout beautification action) within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (col. 20, ll.16-19); a third set of instructions for comparing a second shape to the plurality of features in each of the plurality of polygons to identify a second set of matching layout features, the second shape comprising at least a third edge and a fourth edge related according to a second property within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code and within the ability of the system and software (programming code) for providing shapes/action as retrieving from a remote source or defining by the user (abstract; col. 19, ll.13-19); a fourth set of instructions for performing a second layout beautification action on the second set of matching layout

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features within the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code (col. 19, ll.20-24); the first set of instructions and the second set of instructions are completely executed before the third set of instructions and the fourth set of instructions according the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code and flexibility of executing sets of instructions in any sequence according the programming code via user inputs (col. 20, ll.16-19); the first set of instructions and the second set of instructions are executed concurrently, and wherein comparing the first shape to a selected one of the plurality of features in each of the plurality of polygons is performed before comparing the second shape to the selected one of the plurality of features in each of the plurality of polygons according the software wherein any programming code having plurality of sets of code has an ability of any sequence of having the instructions in the whole code and flexibility of executing sets of instructions in any sequence according the programming code via user inputs (col. 3, ll.14-16; col. 19, ll.22-24); first action and the second action are incorporated in a lookup table col. 2, ll.61-63; ll.65-67).

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen B Rossoshek whose telephone number is 571-272-1905. The examiner can normally be reached on 7:00-4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner
Helen Rossoshek
AU 2825


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